

## Letter from Alexander Graham Bell to Harris Taylor, March 17, 1914

1914, March 17. Dr. Harris Taylor, Lexington Avenue, New York City. Dear Dr. Taylor,

Many thanks for your note of March 10. I think it was a good idea of Gregory's reprinting in the Volta Review, my father's "Principles of Speech & Dictionary of Sounds".

I have not been revising the work, nor indeed did I see it until the appearance of the February and March numbers of the Review. I am sorry to note a typographical error on page 129, where the key word for vowel No 5 is given as "on" instead of "an".

I am glad to know you are taking up the serious study of the Melville Bell symbols, and hope you will give us something upon the subject for the Review.

I do not suppose there is anything perfect under the sun, and I have no doubt the discussion of any weak points in the system might inaugurate improvements, but it is much more easy to find fault than it is to suggest unassailable changes or additions.

The representation of the upper or passive organs, (including the upper teeth) has been provided for by the 2 230 use of the symbols for the lower organs, on a smaller scale, as diacritical marks. (see "Mechanism of Speech", pp 41–49).

The symbol for the point of the tongue, for example, written upon a small scale is used to indicate the upper gum, the part to which the point of the tongue is normally applied. In writing 'point-shut' the upper gum is assumed as the point of application, and not specially indicated because it is the normal part to which the point of the tongue is applied: But if you wish to indicate that the point of the tongue was applied to an abnormal part (say, the

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top of the hard palate), you would then put in the symbol for “front” upon a small scale, as a diacritical mark, to indicate the passive organ.

The diagram on page 41, shows how a simple curve turned in various directions can indicate four points on the lower or active organs, and four points on the upper or passive organs. By applying the signs # outer point, and # inner point, to each of these symbols, we get twelve points on the lower organs and twelve on the upper, which makes such an unnecessarily fine distinction that this symbolization is only used for scientific purposes.

For example, [??] indicates point further out than the point of the tongue, viz: — the lower teeth; and [??] indicates a point further forward than the upper gum, viz: — the upperteeth.

[??] upper lip

[??] inner part of upper lip

[??] outer part of upper lip

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so that [??] indicates the under teeth shut against the outer part of the upper lip, &c &c.

The symbols give us sufficient power to express any imagined position of the vocal organs, and hence should be sufficient to express our idea of the formation of any sound in any language. Of course, our idea of the formation may be all wrong, but we can express it. The difficulty is to discover what the correct position is, and the criticisms that I have seen really amount to this, that the positions represented are not the correct positions, and it simply means that other symbols would more correctly express the true positions, but does not mean inability to express the position if we knew clearly what we want to express, so that I am inclined to agree with Miss Yale, that we do possess, in the Melville Bell symbols, a means of expressing the positions for the sounds of all languages.

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The system is comparable to the system of chemical symbols, which express the formation of chemical compounds. We may criticize the use of these chemical symbols as inaccurate. We might say, for example, that  $H_2O$  does not express properly the proportions of hydrogen and oxygen in forming water. This does not mean that the system of symbols is inaccurate, but simply that our conception of the formation of water is inaccurate, &c., &c.,

We possess means of indicating parts of the mouth in great, even superfluous detail, both active and passive organs, and means for expressing various kinds of apertures between them, so that we do possess a means, and the only 4 means I know of, for expressing our idea of the positions of the organs during the utterance of sounds.

Our idea of the formation may be wrong, in which case the symbol we use is incorrect, but that does not mean that we cannot express the correct position when we have it clearly defined in our minds.

The symbols themselves may perhaps be improved, and the mode of putting them together, but what I see very clearly is this, that the system as it exists today, is capable of expressing, with superfluous exactness our conception of the correct positions, whatever they may be, so that what we need in the way of improvement is chiefly a more correct analysis of the positions to be represented.

Yours sincerely, Alexander Graham Bell